

WEST

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Main Menu

Search Form

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Cases

Search Results -

Terms	Documents
(((364/\$)!.CCLS.))	0

Database:

US Patents Full-Text Database
 US Pre-Grant Publication Full-Text Database
 JPO Abstracts Database
 EPO Abstracts Database
 Derwent World Patents Index
 IBM Technical Disclosure Bulletins

Search:

Refine Search

Recall Text

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Search History
DATE: Wednesday, February 12, 2003
[Printable Copy](#)
[Create Case](#)
Set Name Query
 side by side

Hit Count Set Name
 result set

DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR

<u>L55</u>	(((364/\$)!.CCLS.))	0	<u>L55</u>
<u>L54</u>	(((706/52)!.CCLS.))	371	<u>L54</u>
<u>L53</u>	(((706/\$)!.CCLS.))	5053	<u>L53</u>
<u>L52</u>	(((705/30)!.CCLS.))	473	<u>L52</u>
<u>L51</u>	(((705/28)!.CCLS.))	740	<u>L51</u>
<u>L50</u>	(((705/26)!.CCLS.))	2055	<u>L50</u>
<u>L49</u>	(((705/7)!.CCLS.))	778	<u>L49</u>
<u>L48</u>	(((707/201)!.CCLS.))	731	<u>L48</u>
<u>L47</u>	(((707/100)!.CCLS.))	1409	<u>L47</u>
<u>L46</u>	(((707/\$)!.CCLS.))	14297	<u>L46</u>
<u>L45</u>	(((705/\$)!.CCLS.))	18209	<u>L45</u>
<u>L44</u>	(((705/16)!.CCLS.))	541	<u>L44</u>
<u>L43</u>	(((705/5)!.CCLS.))	355	<u>L43</u>
<u>L42</u>	(((705/44)!.CCLS.))	303	<u>L42</u>
<u>L41</u>	(((705/39)!.CCLS.))	710	<u>L41</u>

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WEST Refine Search

L40 (((705/35)!.CCLS.))
L39 (((705/1)!.CCLS.))
L38 ((705/14)!.CCLS.)
L37 L36 and dimension\$ near5 database near5 tables
L36 L35 and report
L35 L34 and customer near5 profile
L34 L33 and code
L33 data near3 warehouse
L32 datawarehous\$

DB=USPT; PLUR=YES; OP=OR

L31 4972504.pn.
L30 5036314.pn.
L29 5168445.pn.
L28 5191522.pn.
L27 5299115.pn.
L26 5615109.pn.
L25 5644723.pn.
L24 5715450.pn.
L23 5721903.pn.
L22 5758355.pn.
L21 5787437.pn.
L20 5794246.pn.
L19 5854746.pn.
L18 5873096.pn.
L17 5893075.pn.
L16 6151601.pn.
L15 6167405.pn.
L14 5386556.pn.
L13 5550971.pn.
L12 5659724.pn.
L11 5675785.pn.
L10 5806060.pn.
L9 5995958.pn.
L8 6212524.pn.

DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR

L7 5794246.uref.
L6 599286.uref.

DB=USPT; PLUR=YES; OP=OR

L5 5808612.pn.
L4 5808612.pn.
L3 6112209.pn.

DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR

789	<u>L40</u>
1574	<u>L39</u>
1506	<u>L38</u>
2	<u>L37</u>
88	<u>L36</u>
111	<u>L35</u>
939	<u>L34</u>
1567	<u>L33</u>
9	<u>L32</u>
1	<u>L31</u>
1	<u>L30</u>
1	<u>L29</u>
1	<u>L28</u>
1	<u>L27</u>
1	<u>L26</u>
1	<u>L25</u>
1	<u>L24</u>
1	<u>L23</u>
1	<u>L22</u>
1	<u>L21</u>
1	<u>L20</u>
1	<u>L19</u>
1	<u>L18</u>
1	<u>L17</u>
1	<u>L16</u>
1	<u>L15</u>
1	<u>L14</u>
1	<u>L13</u>
1	<u>L12</u>
1	<u>L11</u>
1	<u>L10</u>
1	<u>L9</u>
1	<u>L8</u>
10	<u>L7</u>
1	<u>L6</u>
1	<u>L5</u>
1	<u>L4</u>
1	<u>L3</u>

L2 5767854.uref.
L1 5767854.pn.

20 L2
2 L1

END OF SEARCH HISTORY

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Search Results -

Terms	Documents
5794246.uref.	10

Database:

US Patents Full-Text Database
 US Pre-Grant Publication Full-Text Database
 JPO Abstracts Database
 EPO Abstracts Database
 Derwent World Patents Index
 IBM Technical Disclosure Bulletins

Search:

Refine Search

Recall Text

Clear

Search History
 DATE: Wednesday, February 12, 2003 [Printable Copy](#) [Create Case](#)

<u>Set Name</u> side by side	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> result set
<i>DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>			
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<u>L6</u>	599286.uref.	1	<u>L6</u>
<i>DB=USPT; PLUR=YES; OP=OR</i>			
<u>L5</u>	5808612.pn.	1	<u>L5</u>
<u>L4</u>	5808612.pn.	1	<u>L4</u>
<u>L3</u>	6112209.pn.	1	<u>L3</u>
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<u>L2</u>	5767854.uref.	20	<u>L2</u>
<u>L1</u>	5767854.pn.	2	<u>L1</u>

END OF SEARCH HISTORY

WEST

Generate Collection

Print

Search Results - Record(s) 1 through 2 of 2 returned.☐ 1. Document ID: US 6385301 B1

L37: Entry 1 of 2

File: USPT

May 7, 2002

US-PAT-NO: 6385301

DOCUMENT-IDENTIFIER: US 6385301 B1

TITLE: Data preparation for traffic track usage measurement

DATE-ISSUED: May 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nolting; Thomas A.	Holliston	MA		
LaPearl; Richard	Princeton	MA		
Dion; Karen	Dudley	MA		

US-CL-CURRENT: 379/32.01; 379/112.01, 379/112.07, 379/133, 379/134, 379/32.02

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 2. Document ID: US 6351453 B1

L37: Entry 2 of 2

File: USPT

Feb 26, 2002

US-PAT-NO: 6351453

DOCUMENT-IDENTIFIER: US 6351453 B1

TITLE: Internet service provider (ISP) finder

DATE-ISSUED: February 26, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nolting; Thomas A.	Holliston	MA		
Dion; Karen	Dudley	MA		
LaPearl; Richard	Princeton	MA		
Noonan; Sheila	Falmouth	MA		

US-CL-CURRENT: 370/234; 370/232, 370/233, 379/112.01, 379/133

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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Generate Collection

Print

Terms	Documents
L36 and dimension\$ near5 database near5 tables	2

Display Format:

-

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L2: Entry 5 of 20

File: USPT

Nov 13, 2001

US-PAT-NO: 6317750

DOCUMENT-IDENTIFIER: US 6317750 B1

TITLE: Method and apparatus for accessing multidimensional data

DATE-ISSUED: November 13, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tortolani; Thomas R.	Castro Valley	CA		
Nouri; Koorosh M.	Foster City	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Hyperion Solutions Corporation	Sunnyvale	CA			02

APPL-NO: 09/ 178059 [PALM]
 DATE FILED: October 26, 1998

INT-CL: [07] G06 F 17/00

US-CL-ISSUED: 707/103; 707/102, 707/3, 707/4, 707/5, 345/335, 345/355

US-CL-CURRENT: 707/103R; 345/853, 707/102, 707/3, 707/4, 707/5

FIELD-OF-SEARCH: 707/3, 707/4, 707/5, 707/101, 707/103, 707/104, 707/503, 706/11, 345/335, 345/355

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

☐ Search Selected☐ Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	5463724	October 1995	Anderson et al.	707/503
<input type="checkbox"/>	5471612	November 1995	Schlaflly	707/104
<input type="checkbox"/>	5603021	February 1997	Spencer et al.	707/4
<input type="checkbox"/>	5604854	February 1997	Glassey	707/503
<input type="checkbox"/>	5680613	October 1997	Atsumi	707/103
<input type="checkbox"/>	5767854	June 1998	Amwar	345/355
<input type="checkbox"/>	5845270	December 1998	Schatz et al.	706/11
<input type="checkbox"/>	5883623	March 1999	Cseri	345/335
<input type="checkbox"/>	5918232	June 1999	Pouschine et al.	707/103
<input type="checkbox"/>	6002865	December 1999	Thomsen	707/3
<input type="checkbox"/>	6094651	July 2000	Agrawal et al.	707/5
<input type="checkbox"/>	6112209	August 2000	Gusack	707/101

OTHER PUBLICATIONS

2/12/03 10:17 AM

Microsoft Excel, PivotTables: Analyzing data interactively
Oracle Corporation, Oracle Express Objects User's Guide, Release 2.1, 1997.
Oracle Corporation, Oracle Express Web Agents User's Guide, Release 1.2, 1997.

ART-UNIT: 212

PRIMARY-EXAMINER: Alam; Hosain T.

ASSISTANT-EXAMINER: Ly; Anh

ABSTRACT:

Retrieving multidimensional data from a data source and displaying the data in a familiar and pre-existing user interface automatically propagates user-created formulas thereby eliminating the need for users to re-enter formulas. A data representation of the multidimensional data is sent to a query processor which creates row and column structures. These structures are manipulated based on a user action, such as zoom-in, and a multidimensional data output tree showing a hierarchy of the multidimensional data. Also created is a blueprint containing instructions on insertions and deletions to be carried out by the program associated with the pre-existing user interface, such as a spreadsheet program. Once the blueprint is interpreted by the program, typically through a data representation manipulator or common spreadsheet layer, the user interface is configured to accommodate the returned multidimensional data. Once the user interface is populated with the data, the program, such as the spreadsheet program, adjusts the user-created formula cell designations to reflect the new configuration.

38 Claims, 14 Drawing figures

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L2: Entry 8 of 20

File: USPT

Aug 28, 2001

US-PAT-NO: 6282546

DOCUMENT-IDENTIFIER: US 6282546 B1

TITLE: System and method for real-time insertion of data into a multi-dimensional database for network intrusion detection and vulnerability assessment

DATE-ISSUED: August 28, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gleichen; Robert	San Antonio	TX		
Shanklin; Steven	San Antonio	TX		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Cisco Technology, Inc.	San Jose	CA			02

APPL-NO: 09/ 107790 [PALM]
DATE FILED: June 30, 1998INT-CL: [07] G06 F 17/30US-CL-ISSUED: 707/102; 707/6, 713/201
US-CL-CURRENT: 707/102; 707/6, 713/201FIELD-OF-SEARCH: 707/4, 707/6, 707/10, 707/102, 707/104, 345/355-357, 709/318,
713/200-202

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected**Search ALL**

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>4868866</u>	September 1989	Williams, Jr.	340/825.31
<input type="checkbox"/>	<u>4937743</u>	June 1990	Rassman	705/8
<input type="checkbox"/>	<u>5032979</u>	July 1991	Hecht et al.	364/200
<input type="checkbox"/>	<u>5101402</u>	March 1992	Chiu et al.	370/17
<input type="checkbox"/>	<u>5278901</u>	January 1994	Shieh et al.	380/4
<input type="checkbox"/>	<u>5319777</u>	June 1994	Perez	395/600
<input type="checkbox"/>	<u>5404488</u>	April 1995	Kerrigan et al.	711/133
<input type="checkbox"/>	<u>5414833</u>	May 1995	Hershey et al.	395/575
<input type="checkbox"/>	<u>5448724</u>	September 1995	Hayashi	395/182.02
<input type="checkbox"/>	<u>5488715</u>	January 1996	Wainwright	395/182.02
<input type="checkbox"/>	<u>5524238</u>	June 1996	Miller et al.	395/600
<input type="checkbox"/>	<u>5557742</u>	September 1996	Smaha et al.	395/186
<input type="checkbox"/>	<u>5592666</u>	January 1997	Perez et al.	395/600
<input type="checkbox"/>	<u>5606668</u>	February 1997	Shwed	395/200.11
<input type="checkbox"/>	<u>5621889</u>	April 1997	Lermuzeaux et al.	395/186
<input type="checkbox"/>	<u>5647058</u>	July 1997	Agrawal et al.	395/601
<input type="checkbox"/>	<u>5649190</u>	July 1997	Sharif-Askary et al.	707/1
<input type="checkbox"/>	<u>5699513</u>	December 1997	Feigen et al.	395/187.01
<input type="checkbox"/>	<u>5721910</u>	February 1998	Unger et al.	395/611
<input type="checkbox"/>	<u>5767854</u>	June 1998	Anwar	345/355
<input type="checkbox"/>	<u>5768133</u>	June 1998	Chen et al.	700/95
<input type="checkbox"/>	<u>5774878</u>	June 1998	Marshall	705/35
<input type="checkbox"/>	<u>5793763</u>	August 1998	Mayes et al.	370/389
<input type="checkbox"/>	<u>5796942</u>	August 1998	Esbensen	395/187.01
<input type="checkbox"/>	<u>5798706</u>	August 1998	Kraemer et al.	340/825.07
<input type="checkbox"/>	<u>5805801</u>	September 1998	Holloway et al.	395/187.01
<input type="checkbox"/>	<u>5826014</u>	October 1998	Coley et al.	395/187.01
<input type="checkbox"/>	<u>5854897</u>	December 1998	Radziewicz et al.	709/224
<input type="checkbox"/>	<u>5919257</u>	July 1999	Trostle	713/200
<input type="checkbox"/>	<u>5931946</u>	August 1999	Terada et al.	713/201
<input type="checkbox"/>	<u>5978788</u>	November 1999	Castelli et al.	707/2
<input type="checkbox"/>	<u>5991881</u>	November 1999	Conklin et al.	713/201
<input type="checkbox"/>	<u>5999944</u>	December 1999	Lipkin	707/104
<input type="checkbox"/>	<u>6003036</u>	December 1999	Martin	707/102
<input type="checkbox"/>	<u>6032158</u>	February 2000	Mukhopadhyay et al.	707/201

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"Introduction to Algorithms," by Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest, Chap. 34, pp. 853-885, Copyright .COPYRGT. 1990.

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"Artificial intelligence and intrusion Detection: Current and Future Directions,"

2/12/03 10:19 AM

Jeremy Frank, pp. 1-12, (found at <http://www.cs.purdue.edu/coast/archive/data/categ24.html>), Jun. 1994.
"ASAX Conceptual Overview," ASAX Brochure, A. Mounji, (found at <http://www.cs.purdue.edu/coast/archive/data/categ24.html>), no date.
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"A Software Architecture to Support Misuse Intrusion Detection", S. Kumar, et al., pp. 1-17, (found at <http://www.cs.purdue.edu/coast/archive/data/categ24.html>), Mar. 1995.
"Applying Genetic Programming to Intrusion Detection", M. Crosbie, et al., pp. 1-8, (found at <http://www.cs.purdue.edu/coast/archive/data/categ24.html>), no date.
"Defending a Computer System Using Autonomous Agents", M. Crosbie, et al., pp. 1-11, (found at <http://www.cs.purdue.edu/coast/archive/data/categ24.html>), Mar. 1994.
"Analysis Of An Algorithm For Distributed Recognition And Accountability", C. Ko, et al., pp. 1-11, (found at <http://www.cs.purdue.edu/coast/archive/data/categ24.html>), no date.
"A Standard Audit Trail Format", Matt Bishop, 10 pages, (found at <http://www.cs.purdue.edu/coast/archive/data/categ24.html>), no date.
Master Thesis entitled USTAT A Real-time Intrusion Detection System for UNIX, University of California, K. Ilgun, pp. 1-204, (found at <http://www.cs.purdue.edu/coast/archive/data/categ24.html>), Nov. 1992.
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"The Architecture and Implementation of Network-Layer Security Under Unix", J. Ioannidis, et al., 11 pages, (found at <http://www.cs.purdue.edu/coast/archive/data/categ30.html>), no date.
"A Best-Case Network Performance Model", S.M. Bellovin, pp. 1-10, (found at <http://www.cs.purdue.edu/coast/archive/data/categ30.html>), Feb. 1992.
"OARnet Security Procedures", K. Varadhan, pp. 1-14, (found at <http://www.cs.purdue.edu/coast/archive/data/categ30.html>), Sep. 1992.
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"TCP Wrapper Network Monitoring, Access Control, and Booby Traps", Wietse Venema, 8 pages., (found at <http://www.cs.purdue.edu/coast/archive/data/categ30.html>), no date.
"Characteristics of Wide-Area TCP/IP Conversations", R. Caceres, et al., pp. 1-12, (found at <http://www.cs.purdue.edu/coast/archive/data/categ30.html>), no date.
"A Unix Network Protocol Security Study: Network Information Service", D.K. Hess, et al., 5 pages, (found at <http://www.cs.purdue.edu/coast/archive/data/categ30.html>),

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"Stack and Queue Integrity on Hostile Platforms", P.T. Devanbu, et al., IEEE Symposium on Security and Privacy, Oakland, CA, (found at <http://seclab.ucdavis.edu/papers.html>), 1998.

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ART-UNIT: 271

PRIMARY-EXAMINER: Von Buhr; Maria N.

ABSTRACT:

A system and method are disclosed for real-time insertion of data into a multi-dimensional database. The system includes a multi-dimensional database and a user interface operable to access and provide views into the multi-dimensional database. A data insertion engine is coupled to and operable to access the multi-dimensional database. The data insertion engine is further operable to receive and process a real-time data feed and to insert data into the multi-dimensional database responsive to processing of the real-time data feed. In one embodiment, the real-time data feed can represent exploited network vulnerabilities, and the system can be used for network intrusion detection and vulnerability assessment. The method includes receiving a real-time data feed representing detection of an event and processing the event against the multi-dimensional database. Cells associated with the event are identified in the multi-dimensional database and appropriate vectors to the identified cells are created. Data representing the event is then inserted at the identified cells. Visibility to the inserted data is provided through a user interface to the multi-dimensional database. In one embodiment, the event can be an exploited network vulnerability, and the method can be used for intrusion detection and vulnerability assessment.

25 Claims, 14 Drawing figures

WEST

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L2: Entry 14 of 20

File: USPT

Jan 11, 2000

US-PAT-NO: 6014671

DOCUMENT-IDENTIFIER: US 6014671 A

TITLE: Interactive retrieval and caching of multi-dimensional data using view elements

DATE-ISSUED: January 11, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Castelli; Vittorio	White Plains	NY		
Li; Chung-Sheng	Ossining	NY		
Smith; John Richard	New Hyde Park	NY		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
International Business Machines Corporation	Armonk	NY				02

APPL-NO: 09/ 079986 [PALM]

DATE FILED: May 15, 1998

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS This application is a continuation of a provisional application Ser. No. 60/081,654, filed on Apr. 14, 1998. The present invention is related to co-pending patent application Ser. No. 09/079,662, entitled "Interactive Representation and Retrieval of Multi-dimensional Data Using View Elements," by Castelli et al., filed of even date herewith, IBM Docket No. YO998111. This co-pending application and the present invention are commonly assigned to the International Business Machines Corporation, Armonk, N.Y. This co-pending application is hereby incorporated by reference in its entirety into the present application.

INT-CL: [06] G09 G 5/36

US-CL-ISSUED: 707/101; 707/3, 707/100, 345/419, 345/139

US-CL-CURRENT: 707/101; 345/418, 345/419, 707/100, 707/3

FIELD-OF-SEARCH: 707/3, 707/100, 707/101, 345/419, 345/139

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

	PAT-NO	ISSUE-DA	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>5384725</u>	January 1995	Coifman et al.	364/807
<input type="checkbox"/>	<u>5454371</u>	October 1995	Fenster et al.	128/660.07
<input type="checkbox"/>	<u>5555409</u>	September 1996	Leenstra, Sr. et al.	707/101
<input type="checkbox"/>	<u>5767854</u>	June 1998	Anwar	345/355
<input type="checkbox"/>	<u>5819016</u>	October 1998	Watanabe et al.	345/119
<input type="checkbox"/>	<u>5821925</u>	October 1998	Carey et al.	345/331
<input type="checkbox"/>	<u>5903271</u>	May 1999	Bardon et al.	345/419

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ART-UNIT: 271

PRIMARY-EXAMINER: Black; Thomas G.

ASSISTANT-EXAMINER: Coby; Frantz

ABSTRACT:

An apparatus and method for representing and retrieving multi-dimensional data such as large satellite images. Images are stored in forms that can be rapidly browsed and retrieved by remote client applications in a drill-down or roll-up fashion. The data can be represented and retrieved using a view element data structure that includes node elements and transition elements between nodes. The data is decomposed (in space or spatial-frequency to construct a tree-based or graph-based data structure) into view elements. A set of view elements is selected, compressed and stored without adversely impacting image view extraction or generation speed. View elements are placed into the node elements of the data structure and the transition elements indicate the processing to generate other view elements in the data structure. In a server-side view construction, the view elements are selectively retrieved from storage, decompressed, and processed to generate the views of the data. In a client-side progressive view construction, the client caches the view elements and processes them in combination with view elements retrieved from the server to generate views of the data. The data reuse at the client reduces data transmission in drill-down or roll-up browsing. Data can be ingested, read and written in units of spatial blocks and decomposed into view elements using the spatial block units. Thus, the ingestion, decomposition, compression, and view retrieval for large images can be done using computer devices that have limited storage and processing capabilities.

19 Claims, 9 Drawing figures

WEST

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L7: Entry 2 of 10

File: USPT

Aug 20, 2002

US-PAT-NO: 6438538

DOCUMENT-IDENTIFIER: US 6438538 B1

TITLE: Data replication in data warehousing scenarios

DATE-ISSUED: August 20, 2002

INVENTOR-INFORMATION:

NAME

Goldring; Robert David

CITY

Morgan Hill

STATE

CA

ZIP CODE

COUNTRY

ASSIGNEE-INFORMATION:

NAME

International Business Machines
Corporation

CITY STATE ZIP CODE COUNTRY TYPE CODE

Armonk NY

02

APPL-NO: 09/ 413945 [PALM]

DATE FILED: October 7, 1999

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/3; 707/4

US-CL-CURRENT: 707/3; 707/4

FIELD-OF-SEARCH: 707/3, 707/2, 707/1, 707/101, 707/102, 707/201, 707/202, 707/100,
707/4, 707/5

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>5675785</u>	October 1997	Hall et al.	707/102
<input type="checkbox"/>	<u>5706495</u>	January 1998	Chadha et al.	707/2
<input type="checkbox"/>	<u>5794246</u>	August 1998	Sankaran et al.	707/101
<input type="checkbox"/>	<u>5848405</u>	December 1998	Norcott	707/1
<input type="checkbox"/>	<u>5870746</u>	February 1999	Kuntson et al.	707/101
<input type="checkbox"/>	<u>5870761</u>	February 1999	Demers et al.	707/201
<input type="checkbox"/>	<u>5884328</u>	March 1999	Mosher, Jr.	707/202
<input type="checkbox"/>	<u>6029163</u>	February 2000	Ziauddin	707/2
<input type="checkbox"/>	<u>6289334</u>	September 2001	Reiner et al.	707/3

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FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
WO 98/09238	March 1998	WO	
WO 98/40804	September 1998	WO	

ART-UNIT: 2174

PRIMARY-EXAMINER: Shah; Sanjiv

ABSTRACT:

A method, apparatus and program storage device for optimizing a query in a relational database management system is provided. The query including aggregate and grouping functions. An application table is preferably located in a source site and an aggregation operation is performed from a target site. After an initial aggregation operation performed from the source-based application table, the further aggregation operations are incrementally performed, by aggregating only the newly inputted relational database data into the target-based base aggregates table. This procedure allows the transformed query to perform more efficiently than the original query, while providing same results.

24 Claims, 3 Drawing figures

WEST

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Search Results - Record(s) 1 through 1 of 1 returned.☐ 1. Document ID: US 6212524 B1

L8: Entry 1 of 1

File: USPT

Apr 3, 2001

US-PAT-NO: 6212524

DOCUMENT-IDENTIFIER: US 6212524 B1

TITLE: Method and apparatus for creating and populating a datamart

DATE-ISSUED: April 3, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weissman; Craig David	Belmont	CA		
Walsh; Gregory Vincent	Cupertino	CA		
Slater, Jr.; Lynn Randolph	Fremont	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
E.piphany, Inc.	San Mateo	CA			02

APPL-NO: 09/ 073752

DATE FILED: May 6, 1998

PARENT-CASE:

CROSS REFERENCES TO RELATED APPLICATIONS This application relates to the following group of applications. Each application in the group relates to, and incorporates by reference, each other application in the group. The invention of each application is assigned to the assignee of this invention. The group of applications includes the following. U.S. patent application Ser. No. 09/385,119, entitled "Method and Apparatus for Creating a Well-Formed Database System Using a Computer," filed Aug. 27, 1999, and having inventors Craig David Weissman, Greg Vincent Walsh and Eliot Leonard Wegbreit. U.S. patent application Ser. No. 09/073,752, entitled "Method and Apparatus for Creating and Populating a Datamart," filed May 6, 1998, and having inventors Craig David Weissman, Greg Vincent Walsh and Lynn Randolph Slater, Jr. U.S. patent application Ser. No. 09/073,733, entitled "Method and Apparatus for Creating Aggregates for Use in a Datamart," filed May 6, 1998, and having inventors Allon Rauer, Gregory Vincent Walsh, John P. McCaskey, Craig David Weissman and Jeremy A. Rassen. U.S. patent application Ser. No. 09/073,753, entitled "Method and Apparatus for Creating a Datamart and for Creating a Query Structure for the Datamart," filed May 6, 1998, and having inventors Jeremy A. Rassen, Emile Litvak, abhi a. shelat, John P. McCaskey and Allon Rauer.

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/101; 707/3

US-CL-CURRENT: 707/101; 707/3

FIELD-OF-SEARCH: 707/1-10, 707/100-104, 707/200-206

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
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<u>5550971</u>	August 1996	Brunner et al.	707/3
<u>5659724</u>	August 1997	Borgida et al.	707/3
<u>5675785</u>	October 1997	Hall et al.	707/102
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<u>5995958</u>	November 1999	Xu	707/3

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Quass, D., "Maintenance Expressions for Views with Aggregation", Proceedings of the 21st International Conference on Very Large Data Bases, IEEE, Zurich, Switzerland, (Sep. 1995), 9 pages.

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Huyn, N., "Multiple-View Self-Maintenance in Data Warehousing Environments", Proceedings of the 23rd International Conference on Very Large Data Bases, IEEE, (1997), pp. 26-35.

Quass, D. et al., "Making Views Self-Maintainable for Data Warehousing", Proceedings of the Fourth International Conference on Parallel and Distributed Information Systems, IEEE, Dec. 1996, pp. 158-169.

Quass, D. et al., "On-Line Warehouse View Maintenance", Proceedings of the 1997 ACM SIGMOD International Conference, ACM Press, 1997, pp. 393-404.

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Harinarayan, V. et al., "Implementing Data Cubes Efficiently", SIGMOD Record, vol. 25, No. 2, Jun. 1996, pp. 205-216.

Gupta, H. et al., "Index Selection for OLAP", IEEE Paper No. 1063-6382/97, IEEE (1997), pp. 208-219.

Labio, W. et al., "Physical Database Design for Data Warehouses", IEEE Paper No. 1063-6382/97, IEEE (1997), pp. 277-288.

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O'Neill, P. et al., "Improved Query Performance with Variant Indexes", Proceedings of the 1997 ACM SIGMOD International Conference, ACM Press, 1997, pp. 38-49.

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"Multiple Selection List Presentation Aids Complex Search", IBM Technical Disclosure Bulletin, vol. 36, No. 10, Oct. 1993, pp. 317-318.

ABSTRACT:

21 Claims, 48 Drawing figures

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WEST**End of Result Set**☐

L11: Entry 1 of 1

File: USPT

Oct 7, 1997

US-PAT-NO: 5675785

DOCUMENT-IDENTIFIER: US 5675785 A

TITLE: Data warehouse which is accessed by a user using a schema of virtual tables

DATE-ISSUED: October 7, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hall; Guy Travis	Loomis	CA		
Sturdevant; Mark	San Jose	CA		
Yee; Suzie Cho	Cupertino	CA		
Fong; Yukon	Union City	CA		
Yoshida; Neil	Sunnyvale	CA		
Randazzo; Guy	Rocklin	CA		
Gratiot; Mark	Forest Hill	CA		
Meyer; Marc	Granite Bay	CA		
Fischer; Brian	Mokelumne Hill	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Hewlett-Packard Company	Palo Alto	CA			02

APPL-NO: 08/ 317437 [PALM]

DATE FILED: October 4, 1994

INT-CL: [06] G06 F 17/30

US-CL-ISSUED: 395/613; 395/601, 395/602, 395/604, 395/611

US-CL-CURRENT: 707/102; 707/1, 707/100, 707/2, 707/4

FIELD-OF-SEARCH: 395/600, 395/148, 395/155-161, 395/159, 395/160, 395/601, 395/602, 395/604, 395/611, 395/613

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

	PAT-NO	ISSUE DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>4819160</u>	April 1989	Tanka et al.	395/600
<input type="checkbox"/>	<u>5276870</u>	January 1994	Shan et al.	395/600
<input type="checkbox"/>	<u>5418950</u>	May 1995	Li et al.	395/600
<input type="checkbox"/>	<u>5418957</u>	May 1995	Narayan et al.	395/700
<input type="checkbox"/>	<u>5428776</u>	June 1995	Rothfield	395/600
<input type="checkbox"/>	<u>5448726</u>	September 1995	Crimsie et al.	395/600
<input type="checkbox"/>	<u>5448727</u>	September 1995	Annevelinbk	395/600
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<input type="checkbox"/>	<u>5519859</u>	May 1996	Grace	395/600
<input type="checkbox"/>	<u>5550971</u>	August 1996	Brunner et al.	395/161

OTHER PUBLICATIONS

"Client/Server accounting: accounting system based on client/server architectures increase productivity" by Stewark McKie, DBMS, V6, n2, p. 62(5); Feb., 1993.
 "Using SQL:" by Que Corporation, 1993.

ART-UNIT: 237

PRIMARY-EXAMINER: Kulik; Paul V.

ASSISTANT-EXAMINER: Alam; Hosain T.

ABSTRACT:

A database warehouse includes a database having data arranged in data tables, e.g., fact tables and reference tables. A warehouse database hub interface is connected to the database. The warehouse database hub interface presents to a user a schema of the data in the database warehouse. The schema consists of virtual tables. Arrangement of the data in the virtual tables is different than arrangement of data in the fact tables and the reference tables. A user generates queries based on the schema provided by the warehouse database hub interface. In response to a such a query for particular information stored in the database warehouse, the warehouse database hub interface modifies the query to take into account pre-computed values and the arrangement of the data within the database warehouse. Then the warehouse database hub interface queries the database warehouse using the modified query to obtain the particular information from the database warehouse. Finally, the warehouse database hub interface forwards the particular information obtained from the database warehouse to the user.

26 Claims, 5 Drawing figures

WEST

Generate Collection

Print

Search Results - Record(s) 1 through 1 of 1 returned.☐ 1. Document ID: US 6167405 A

L15: Entry 1 of 1

File: USPT

Dec 26, 2000

US-PAT-NO: 6167405

DOCUMENT-IDENTIFIER: US 6167405 A

TITLE: Method and apparatus for automatically populating a data warehouse system

DATE-ISSUED: December 26, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Rosensteel, Jr.; Kenneth R.	Phoenix	AZ		
Guhr; Jerry T	Phoenix	AZ		
Picone; Joseph K.	Phoenix	AZ		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Bull HN Information Systems Inc.	Billerica	MA			02

APPL-NO: 09/ 067101

DATE FILED: April 27, 1998

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/102

US-CL-CURRENT: 707/102

FIELD-OF-SEARCH: 707/6, 707/101, 707/102, 395/785

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5708828</u>	January 1998	Coleman	395/785
<u>5870746</u>	February 1999	Knutson	707/101
<u>5918232</u>	June 1999	Pouschine et al.	707/103

OTHER PUBLICATIONS

"Data Warehousing An Introduction", by Grayce Booth, Groupe Bull Technical Update, Man/Jun. 1995, pp. 1-9, Copyright Jun. 1995.
"The Distributed Data Warehouse Solution", by Kirk Mosher and Ken Rosensteel, Groupe Bull Technical Update, May/Jun. 1995, pp. 11-18 Copyright Jun. 1995.
"Bull Warehouse Initiative", by Wayne W. Eckerson, Oct. 1996, Patricia Seybold Group, pp. 1-28, Copyright 1996.

ART-UNIT: 271

PRIMARY-EXAMINER: Amsbury; Wayne

ABSTRACT:

A method and system for facilitating the creation of warehouse requests in a data

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warehouse system. During the design of the data warehouse tables, a repository tool is used for storing a number of new objects such as source and target databases, source and target tables and warehouse requests that are graphically defined and linked together by an administrator with the repository tool. The resulting visual design is so drawn so as to serve as input for each warehouse request to be generated. The administrator invokes a data replication component that operatively couples to the repository tool signaling that the warehouse request is to be implemented. The data replication component automatically creates the different subcomponents of the request by accessing various links stored by the repository tool and displays a visual representation of the subcomponents and their relationships to each other to the administrator. Thereafter, the replication component provides access to menu screens for enabling the administrator to visualize each of the subcomponents of the request and their properties for enabling modifications to be made to such subcomponents for completing configuration of all request subcomponents. Subsequently, the warehouse request can be scheduled to execute and populate the warehouse tables.

35 Claims, 13 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw Desc	Image
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L7: Entry 7 of 10

File: USPT

Jan 15, 2002

US-PAT-NO: 6339775

DOCUMENT-IDENTIFIER: US 6339775 B1

TITLE: Apparatus and method for performing data transformations in data warehousing

DATE-ISSUED: January 15, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zamanian; Kiumarse	San Francisco	CA		
Nesamoney; Diaz	San Francisco	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Informatica Corporation	Menlo Park	CA			02

APPL-NO: 09/ 442060 [PALM]
DATE FILED: November 16, 1999

PARENT-CASE:

This application is a continuation-in-part of and claims the benefit of application Ser. No. 08/966,449 filed on Nov. 7, 1997 and which designated the U.S. Pat. No. 6,014,670.

INT-CL: [07] G06 F 17/30US-CL-ISSUED: 707/101; 707/100, 707/103
US-CL-CURRENT: 707/101; 707/100, 707/103R

FIELD-OF-SEARCH: 707/1, 707/101, 707/100, 707/201, 707/3, 707/4, 707/7, 707/103

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

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<input type="checkbox"/>	<u>5706495</u>	January 1998	Chadha et al.	707/2
<input type="checkbox"/>	<u>5708828</u>	January 1998	Coleman	707/523
<input type="checkbox"/>	<u>5721903</u>	February 1998	Anand et al.	707/5
<input type="checkbox"/>	<u>5781911</u>	July 1998	Young et al.	707/201
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<input type="checkbox"/>	<u>5794229</u>	August 1998	French et al.	707/2
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<input type="checkbox"/>	<u>5832496</u>	November 1998	Anand et al.	707/100
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<input type="checkbox"/>	<u>5870747</u>	February 1999	Sunderesan	707/101
<input type="checkbox"/>	<u>5873102</u>	February 1999	Bridge, Jr. et al.	707/204

OTHER PUBLICATIONS

White, Colin, "Data Warehousing:Cleaning and transforming data" InforDB vol. 10 No. 6. , pp. 11-12, Apr. 1997.*

White Colin, "Managing Data Transformations" Byte vol. 22, No. 12, p. 53-54, Dec. 1997.*

Squire Cass., "Data Extraction and Transformation for the Data Warehouse" 1995 ACM Signoid international conference on management of data, p. 446-447, May 1995

ART-UNIT: 2172

PRIMARY-EXAMINER: Shah; Sanjiv

ABSTRACT:

A transformation description language (TDL) for specifying how data is to be manipulated in a data warehousing application. The TDL is comprised of a source for storing raw data, one or more transformation objects for processing the raw data according to predefined instructions, and a target for storing the processed data. A mapping is used for directing the data flow between the I/O ports corresponding to the source, the plurality of transformation objects, and the target. The mapping specifies the connectivity between the source, transformation, and target objects as well as the order of these connections. There are a number of different transformations which can be performed to manipulate the data. Some such transformations include: an aggregator transformation, an expression transformation, a filter transformation, a lookup transformation, a query transformation, a sequence transformation, a stored procedure transformation, and an update strategy transformation.

13 Claims, 15 Drawing figures

WEST

Generate Collection

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L7: Entry 8 of 10

File: USPT

Aug 28, 2001

US-PAT-NO: 6282544

DOCUMENT-IDENTIFIER: US 6282544 B1

TITLE: Method and apparatus for populating multiple data marts in a single aggregation process

DATE-ISSUED: August 28, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tse; Eva Man-Yan	Sunnyvale	TX		
Lore; Michael Dean	Katy	TX		
Attaway; James Daniel	Katy	TX		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Computer Associates Think, Inc.	Islandia	NY			02

APPL-NO: 09/ 317773 [PALM]

DATE FILED: May 24, 1999

INT-CL: [07] G06 F 17/00

US-CL-ISSUED: 707/101; 707/3, 707/6, 707/8, 707/2

US-CL-CURRENT: 707/101; 707/2, 707/3, 707/6, 707/8

FIELD-OF-SEARCH: 707/2, 707/100, 707/101, 707/201, 707/1, 707/3, 707/6, 707/8, 707/10, 705/10

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

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	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>5778350</u>	July 1998	Adams et al.	707/1
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<input type="checkbox"/>	<u>5799300</u>	August 1998	Agrawal et al.	707/1
<input type="checkbox"/>	<u>5832475</u>	November 1998	Agrawal et al.	707/2
<input type="checkbox"/>	<u>5890154</u>	March 1999	Hsiao et al.	707/8
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<input type="checkbox"/>	<u>6189004</u>	February 2001	Rassen et al.	707/3

OTHER PUBLICATIONS

5. www.pathfinder.com/money/latest/press/PW/1998Sep01/248.html.
1. The Data Warehouse Toolkit--Author, Ralph Kimball--Publisher, John Wiley & Sons 1996--Chapter 13: Aggregates.
2. Planning and Designing the Data Warehouse, Ramon Barquin and Herb Edelstein, Editors--Publisher, Prentice Hall PTR 1997--Chapter 9 Database Design for Data Warehouses: The Basic Requirements--pp. 194-197 Different Star Scheme Types.
3. Building, Using, and Managing the Data Warehouse, Ramon Barquin and Herb Edelstein, Editors--Publisher, Prentice Hall PTR 1997--p. 10, Fig. 1-2: where Aggregation Fits.
4. www.prismsolutions.com/news_info/corp.sub.13_capabilities6.html--Corporate Capabilities.

ART-UNIT: 211

PRIMARY-EXAMINER: Black; Thomas

ASSISTANT-EXAMINER: Pardo; Thuy N.

ABSTRACT:

A method of populating multiple data marts in a single operation from a set of transactional data held in a database in a single aggregation process, in which aggregate values are calculated only once, a determination is made as to which output data marts required the aggregate value, and the aggregate values are output to the appropriate data marts. Dimension data associated with the output aggregate records is also output to the appropriate data marts.

12 Claims, 5 Drawing figures

WEST**End of Result Set**
☐ **Generate Collection** **Print**

L7: Entry 10 of 10

File: USPT

Jan 11, 2000

US-PAT-NO: 6014670

DOCUMENT-IDENTIFIER: US 6014670 A

TITLE: Apparatus and method for performing data transformations in data warehousing

DATE-ISSUED: January 11, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zamanian; M S Kiumarse	San Francisco	CA		
Nesamoney; Diaz	San Francisco	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Informatica Corporation	Menlo Park	CA			02

APPL-NO: 08/ 966449 [PALM]

DATE FILED: November 7, 1997

INT-CL: [06] G06 F 17/30

US-CL-ISSUED: 707/101; 707/100

US-CL-CURRENT: 707/101; 707/100

FIELD-OF-SEARCH: 707/101, 707/201, 707/3, 707/4, 707/7, 707/100

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

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	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>5692181</u>	November 1997	Anand et al.	707/102
<input type="checkbox"/>	<u>5706495</u>	January 1998	Chadha et al.	707/2
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<input type="checkbox"/>	<u>5873102</u>	February 1999	Bridge, Jr. et al.	707/204

OTHER PUBLICATIONS

White, Colin. "Data Warehousing: Cleaning and Transforming Data." InforDB vol. 10 No. 6. Apr. 1997. Database Associates INT, USA. pp. 11-12. XP-002091743.
White, Colin. "Managing Data Transformations." Byte (International Edition) vol. 22, No. 12. Dec. 1997. McGraw-Hill, USA. pp. 53-54. XP002091744.
Squire, Cass. "Data Extraction and Transformation for the Data Warehouse." 1995 ACM Sigmod International Conference on Management of Data, San Jose, CA, USA, May 22-25, 1995. pp. 446-447. XP0092091745.

ART-UNIT: 277

PRIMARY-EXAMINER: Kulik; Paul V.

ASSISTANT-EXAMINER: Shah; Sanjiv

ABSTRACT:

A transformation description language (TDL) for specifying how data is to be manipulated in a data warehousing application. The TDL is comprised of a source for storing raw data, one or more transformation objects for processing the raw data according to predefined instructions, and a target for storing the processed data. A mapping is used for directing the data flow between the I/O ports corresponding to the source, the plurality of transformation objects, and the target. The mapping specifies the connectivity between the source, transformation, and target objects as well as the order of these connections. There are a number of different transformations which can be performed to manipulate the data. Some such transformations include: an aggregator transformation, an expression transformation, a filter transformation, a lookup transformation, a query transformation, a sequence transformation, a stored procedure transformation, and an update strategy transformation.

51 Claims, 13 Drawing figures

WEST**End of Result Set**☐ **Generate Collection** **Print**

L37: Entry 2 of 2

File: USPT

Feb 26, 2002

US-PAT-NO: 6351453

DOCUMENT-IDENTIFIER: US 6351453 B1

TITLE: Internet service provider (ISP) finder

DATE-ISSUED: February 26, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nolting; Thomas A.	Holliston	MA		
Dion; Karen	Dudley	MA		
LaPearl; Richard	Princeton	MA		
Noonan; Sheila	Falmouth	MA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Bell Atlantic Network Services, Inc.	Arlington	VA			02

APPL-NO: 09/ 188679 [PALM]
DATE FILED: November 10, 1998

PARENT-CASE:
CROSS-REFERENCE TO RELATED APPLICATION This application is a continuation-in-part of U.S. patent application Ser. No. 09/048,102 filed on Mar. 26, 1998 entitled NETWORK PLANNING TRAFFIC MEASUREMENT PROGRAM, the disclosure of which is entirely incorporated herein by reference.

INT-CL: [07] H04 M 15/00, H04 J 1/16, H04 L 5/12US-CL-ISSUED: 370/234; 370/232, 370/233, 379/112.01, 379/133
US-CL-CURRENT: 370/234; 370/232, 370/233, 379/112.01, 379/133

FIELD-OF-SEARCH: 379/112, 379/113, 379/133, 379/134, 379/135, 379/34, 379/265, 379/266, 379/309, 379/111, 370/229, 370/230, 370/231, 370/232, 370/233, 370/237, 370/235, 370/236, 370/234

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

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<input type="checkbox"/>	<u>4760594</u>	July 1988	Reed	
<input type="checkbox"/>	<u>5285494</u>	February 1994	Sprecher et al.	
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<input type="checkbox"/>	<u>5864608</u>	January 1999	Brownmiller et al.	
<input type="checkbox"/>	<u>5867558</u>	February 1999	Swanson	
<input type="checkbox"/>	<u>5867565</u>	February 1999	Morikawa	
<input type="checkbox"/>	<u>5875238</u>	February 1999	Glitho et al.	
<input type="checkbox"/>	<u>5881140</u>	March 1999	Gerault et al.	
<input type="checkbox"/>	<u>5896445</u>	April 1999	Kay et al.	379/135
<input type="checkbox"/>	<u>5901208</u>	May 1999	Jabbarnezhad	
<input type="checkbox"/>	<u>5905785</u>	May 1999	Dunn et al.	379/113
<input type="checkbox"/>	<u>5905985</u>	May 1999	Malloy et al.	
<input type="checkbox"/>	<u>5907603</u>	May 1999	Gallagher et al.	
<input type="checkbox"/>	<u>5917898</u>	June 1999	Bassa et al.	
<input type="checkbox"/>	<u>5933490</u>	August 1999	White et al.	379/221
<input type="checkbox"/>	<u>5937042</u>	August 1999	Sofman	
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<input type="checkbox"/>	<u>5949862</u>	September 1999	Fukuzawa et al.	
<input type="checkbox"/>	<u>5999604</u>	December 1999	Walter	

<input type="checkbox"/>	<u>6011838</u>	January 2000	Cox	379/113
<input type="checkbox"/>	<u>6052447</u>	April 2000	Golden et al.	379/114
<input type="checkbox"/>	<u>6052448</u>	April 2000	Janning	
<input type="checkbox"/>	<u>6067354</u>	May 2000	Bauer et al.	
<input type="checkbox"/>	<u>6075848</u>	June 2000	Lunn et al.	
<input type="checkbox"/>	<u>6078647</u>	June 2000	D'Eletto	379/34
<input type="checkbox"/>	<u>6112238</u>	August 2000	Boyd et al.	
<input type="checkbox"/>	<u>6141412</u>	October 2000	Smith et al.	

OTHER PUBLICATIONS

"Gentia Software, Section 3: Query and Reporting Tools", by META Group, Inc., Data Warehousing Tools Bulletin (Aug. 1997); pp., 3615-3620.

ART-UNIT: 2743

PRIMARY-EXAMINER: Kuntz; Curtis

ASSISTANT-EXAMINER: Barnie; Rexford N

ABSTRACT:

Specialized telecom network users who burden the network, such as Internet Service Providers (ISPs), are identified by analysis of network traffic data to identify addresses (e.g. telephone numbers) for destinations receiving unique patterns of incoming traffic. For an ISP, in particular, the analysis involves identifying telephone numbers of destinations receiving a high volume of calls and having connections exhibiting a long average hold time. To further enhance the ISP finder analysis, the call data may be examined to confirm that there is no outgoing call traffic from any station associated with the candidate ISP numbers. When numbers are identified by the call data analysis, a technician can call each number and listen for a modem tone, as a confirmation that each candidate number actually is of a data service, such as an ISP. Similar methodologies can identify destination numbers for other unique service providers, such as credit card verification services. The preferred embodiments utilize automated systems to compile and analyze call records from standard messages of a telephone network, such as interoffice signaling messages or automated accounting messages.

40 Claims, 8 Drawing figures

WEST

Generate Collection

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L37: Entry 1 of 2

File: USPT

May 7, 2002

US-PAT-NO: 6385301

DOCUMENT-IDENTIFIER: US 6385301 B1

TITLE: Data preparation for traffic track usage measurement

DATE-ISSUED: May 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nolting; Thomas A.	Holliston	MA		
LaPearl; Richard	Princeton	MA		
Dion; Karen	Dudley	MA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
Bell Atlantic Services Network, Inc.	Arlington	VA				02

APPL-NO: 09/ 188713 [PALM]

DATE FILED: November 10, 1998

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATION This application is a continuation-in-part of U.S. patent application Ser. No. 09/048,102 filed on Mar. 26, 1998 entitled NETWORK PLANNING TRAFFIC MEASUREMENT PROGRAM, the disclosure of which is entirely incorporated herein by reference.

INT-CL: [07] H04 M 1/24, H04 M 15/00

US-CL-ISSUED: 379/32.01; 379/32.02, 379/112.01, 379/112.07, 379/133, 379/134
US-CL-CURRENT: 379/32.01; 379/112.01, 379/112.07, 379/133, 379/134, 379/32.02

FIELD-OF-SEARCH: 379/113, 379/133, 379/134, 379/34, 379/32.01, 379/32.02, 379/32.03, 379/32.05, 379/112.01, 379/112.05, 379/112.06, 379/112.07, 379/114.01

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	4456788	June 1984	Kline et al.	
<input type="checkbox"/>	4760594	July 1988	Reed	
<input type="checkbox"/>	4788718	November 1988	McNabb et al.	379/113
<input type="checkbox"/>	5008929	April 1991	Olsen et al.	379/112
<input type="checkbox"/>	5285494	February 1994	Sprecher et al.	379/59
<input type="checkbox"/>	5333183	July 1994	Herbert	
<input type="checkbox"/>	5359649	October 1994	Rosu et al.	
<input type="checkbox"/>	5425087	June 1995	Gerber et al.	
<input type="checkbox"/>	5457729	October 1995	Hamann et al.	

<input type="checkbox"/>	<u>5475732</u>	December 1995	Pester, III	
<input type="checkbox"/>	<u>5563930</u>	October 1996	Pester, III	
<input type="checkbox"/>	<u>5579371</u>	November 1996	Aridas et al.	
<input type="checkbox"/>	<u>5592530</u>	January 1997	Brockman et al.	
<input type="checkbox"/>	<u>5712908</u>	January 1998	Brinkman et al.	
<input type="checkbox"/>	<u>5715294</u>	February 1998	Pester, III	
<input type="checkbox"/>	<u>5737399</u>	April 1998	Witzman et al.	
<input type="checkbox"/>	<u>5757895</u>	May 1998	Aridas et al.	
<input type="checkbox"/>	<u>5768352</u>	June 1998	Elliott et al.	379/112
<input type="checkbox"/>	<u>5774530</u>	June 1998	Montgomery et al.	379/112
<input type="checkbox"/>	<u>5774532</u>	June 1998	Gottlieb et al.	379/112
<input type="checkbox"/>	<u>5793839</u>	August 1998	Farris et al.	
<input type="checkbox"/>	<u>5802145</u>	September 1998	Farris et al.	
<input type="checkbox"/>	<u>5809120</u>	September 1998	Montgomery et al.	
<input type="checkbox"/>	<u>5809121</u>	September 1998	Elliott et al.	379/127
<input type="checkbox"/>	<u>5825769</u>	October 1998	O'Reilly et al.	
<input type="checkbox"/>	<u>5828729</u>	October 1998	Clermont et al.	
<input type="checkbox"/>	<u>5835583</u>	November 1998	Hetz et al.	379/220
<input type="checkbox"/>	<u>5838682</u>	November 1998	Dekelbaum et al.	
<input type="checkbox"/>	<u>5838796</u>	November 1998	McNeil et al.	
<input type="checkbox"/>	<u>5844981</u>	December 1998	Pitchford et al.	
<input type="checkbox"/>	<u>5850426</u>	December 1998	Watkins et al.	
<input type="checkbox"/>	<u>5854834</u>	December 1998	Gottlieb et al.	379/113
<input type="checkbox"/>	<u>5854835</u>	December 1998	Montgomery et al.	
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<input type="checkbox"/>	<u>5917898</u>	June 1999	Bassa et al.	379/133
<input type="checkbox"/>	<u>5930344</u>	July 1999	Relyea et al.	379/126
<input type="checkbox"/>	<u>5933490</u>	August 1999	White et al.	
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<input type="checkbox"/>	<u>5940471</u>	August 1999	Homayoun	
<input type="checkbox"/>	<u>5949862</u>	September 1999	Fukuzawa et al.	379/113
<input type="checkbox"/>	<u>5999604</u>	December 1999	Walter	379/133
<input type="checkbox"/>	<u>6011838</u>	January 2000	Cox	
<input type="checkbox"/>	<u>6067354</u>	May 2000	Bauer et al.	379/113
<input type="checkbox"/>	<u>6078647</u>	June 2000	D'Eletto	

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"Investor Relations FAQs" published by Inet Technologies, Inc., Sep. 7, 2000.
 Promotional materials entitled "Network Operations & Maintenance", "IT: seven

2/12/03 10:50 AM

Revenue Assurance Applications", "Diagnostics", and "IP/SS7 Interoperability" by Inet Technologies, Inc.
Promotional Brochure entitled "GeoProbe Mobile", published by Inet Technologies, Inc.
Promotional materials published by Inet Technologies, Inc., including GeoProbe Service Provider's Competitive Advantage, GeoCare, and 2 press releases.
Inet Technologies Inc. (INTI) Quarterly Report (SEC form 10-Q), dated Aug. 4, 2000.
New Release entitled AT&T to manage international gateway sites with Inet's GeoProbe system; dated Jan. 26, 1998.
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Hewlett Packard Brochure entitled "Wide area networking protocol analysis solutions for the long run". re HP 4954A wide area network protocol analyzer, 1987.
Article entitled "ASQIC 800 Call Data Master", published in AT&T Technical Journal, pp. 21-31, May/Jun. 1987, vol. 66, Issue 3.
Article entitled "By probing your SS7 links, you can gather all sorts of information", published in Wireless Review, May 1, 1998.
Press Release entitled "Inet Technologies Reports Record Revenues for Eleventh Consecutive Quarter" dated Jan. 25, 2001.
Hewlett Packard 1991 "Test & Measurement Catalog", entitled "Data Communications Test Equipment", p. 567.
Hewlett Packard Brochure entitled "Unlock the secrets of Signaling System No. 7--fast", HP 37900B and 37900C Signaling Test Sets.
Hewlett Packard Brochure entitled "GSM Signaling Test System", HP 37900 Product Note-1.
"Can you afford to be without SS7 network surveillance?" by Rex R. Hester, Telephony, Dec. 3, 1990.
"Telecommunications", International Edition, vol. 23, No. 8, Aug. 1989.
Article entitled "Test and Measurement Techniques for GSM", from Telecommunications, Dec. 1989 issue.
"Gentia Software, Section 3: Query and Reporting Tools", by META Group, Inc., Data Warehousing Tools Bulletin (Aug. 1997); pp. 3615-3620.

ART-UNIT: 2643

PRIMARY-EXAMINER: Nguyen; Duc

ASSISTANT-EXAMINER: Tran; Quoc D.

ABSTRACT:

A monitoring system captures and processes messages from SS7 links, to compile call detail records (CDRs) for all interoffice call attempts. The CDRs are uploaded into a relational database. Automatic Message Accounting (AMA) records also are accumulated and uploaded to another relational database. A data preparation operation enhances the records for further processing. This data preparation operation involves translating information in the records into more useful forms, using external reference data regarding the monitored network. For example, the data preparation translates SS7 point codes or NPA-NXX codes in the records to textual names of originating and terminating offices. The data preparation also spreads the usage information from the records to properly allocate usage time to predefined intervals. Another function of the data preparation stage is to form one or more predefined tables from the processed records, for example a table of modified records and one or more specialized summary tables. The data, so prepared, is uploaded to an on-line analytical processing application.

22 Claims, 7 Drawing figures

WEST☐

L36: Entry 74 of 88

File: USPT

Nov 21, 2000

US-PAT-NO: 6151601

DOCUMENT-IDENTIFIER: US 6151601 A

TITLE: Computer architecture and method for collecting, analyzing and/or transforming internet and/or electronic commerce data for storage into a data storage area

DATE-ISSUED: November 21, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Papierniak; Karen A.	Fenton	MN		
Thaisz; James E.	Lincroft	NJ		
Diwekar; Anjali M.	Matawan	NJ		
Chiang; Luo-Jen	Freehold	NJ		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
NCR Corporation	Dayton	OH			02

APPL-NO: 08/ 968728 [PALM]
DATE FILED: November 12, 1997

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/10; 707/1
US-CL-CURRENT: 707/10; 707/1

FIELD-OF-SEARCH: 707/1, 707/2, 707/8, 707/9, 707/10, 707/102, 707/104

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>5668988</u>	September 1997	Chen et al.	707/101
<input type="checkbox"/>	<u>5752246</u>	May 1998	Rogers et al.	707/10
<input type="checkbox"/>	<u>5802511</u>	September 1998	Kouchi et al.	707/2
<input type="checkbox"/>	<u>5825751</u>	October 1998	Papierniak et al.	370/248
<input type="checkbox"/>	<u>5867799</u>	February 1999	Lang et al.	707/1

ART-UNIT: 271

PRIMARY-EXAMINER: Black; Thomas G.

ASSISTANT-EXAMINER: Shah; Sanjiv

ABSTRACT:

A computer system collects, analyzes and/or transforms Internet and/or electronic commerce data of service providers. The Internet and/or electronic commerce data includes one or more of business operational data and network operational data. The mapping system includes a database storing the Internet and/or electronic commerce data for interrogation by the CSP, and at least one computer station including data transformation and database load utilities. The computer station performs one or more of the functions: of transforming and organizing the business operational data; analyzing, and organizing the web server operational data pertaining to web page requests, accesses, and browsing into the format suitable to be loaded into said database; analyzing and organizing the Internet operational data pertaining to network sessions and accesses; correlating the network sessions, and authorization and application access data to customers; creating directories of applications; translating raw system data pertaining to Internet and/or electronic commerce applications into a business context; and correlating the business operational data and the network operational data into one or more datasets.

31 Claims, 23 Drawing figures

WEST☐ **Generate Collection** **Print**

L36: Entry 75 of 88

File: USPT

Nov 21, 2000

US-PAT-NO: 6151584

DOCUMENT-IDENTIFIER: US 6151584 A

TITLE: Computer architecture and method for validating and collecting and metadata and data about the internet and electronic commerce environments (data discoverer)

DATE-ISSUED: November 21, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Papierniak; Karen A.	St. Paul	MN		
Thaisz; James E.	Lincroft	NJ		
Chiang; Luo-Jen	Freehold	NJ		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
NCR Corporation	Dayton	OH			02

APPL-NO: 08/ 975433 [PALM]
DATE FILED: November 20, 1997

INT-CL: [07] G06 F 17/60

US-CL-ISSUED: 705/10
US-CL-CURRENT: 705/10

FIELD-OF-SEARCH: 701/1, 701/10, 701/6, 701/7, 701/104, 395/610

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

☐ **Search Selected** **Search ALL**

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>5583763</u>	December 1996	Atcheson et al.	707/3
<input type="checkbox"/>	<u>5696965</u>	December 1997	Dedrick	395/610
<input type="checkbox"/>	<u>5715450</u>	February 1998	Ambrose et al.	395/614
<input type="checkbox"/>	<u>5890152</u>	March 1999	Rapaport et al.	707/6

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East Texas ISP Survey; <http://www.tesramp.net/.about.dbell/isp.htm>, Sep. 1996.
Companies begin tracking web-use patterns; CommunicationsWeek, Issue 633, p71,2p, 1c; Maddox, Kate, Oct. 1996.
Tracking Down Internet Spending; Sales & Marketing Management, vol. 148, Issue 4, p20, 1/3p, 2 charts; Lucas, Allison, Apr. 1996.
Toeing The Line On The 'Net; Communications News, vol. 34, Issue3, p34, 1/2p; Salt River Project; WEBTRACK, Mar. 1997.
Kenan Systems: Corporate initiative to capture leadership in converging communication markets; M2 Presswire; Apr. 1996.
Data Warehousing: Pilot software announces strategic alliance with IBM; Edge: Work-Group Computing Report vol.: 6 Issue: 283, Oct. 1995.
Pilot Software: Pilot Software Launches major new data mining initiative: M2

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Presswire, Nov. 1995.

An Introduction To data Warehousing: Vivek R. Gupta, System Services corporation,
Sep. 1996.

ART-UNIT: 274

PRIMARY-EXAMINER: Trammell; James P.

ASSISTANT-EXAMINER: Retta; Yehdega

ABSTRACT:

A method of collecting subscriber specified information supports retrieval of information to analyze Internet and/or electronic commerce data over or from the World Wide Web for service providers using a computer. The method includes the steps of providing a customer with a questionnaire and/or forms to collect customer specific data, collecting the customer specific data, and parsing the customer specific data into environmental data and business data. The method also includes the steps of determining information source requirements (representing predetermined requirements) and optional decision support requirements (representing customer specified requirements), responsive to one or both of the environmental data and the business data, and determining core business rules and core data sources responsive to the information source requirements. The method also includes the steps of determining optional incremental business rules and optional incremental data sources responsive to the decision support requirements, and determining the information requiring retrieval to analyze the Internet and/or electronic commerce data over or from the World Wide Web utilizing the core business rules, the core data sources, the optional incremental business rules, and the optional incremental data sources.

45 Claims, 21 Drawing figures

09483386_CLS
Most Frequently Occurring Classifications of Patents Returned
From A Search of 09483386 on December 18, 2002

Original Classifications

6 235/383
5 379/114.14
4 235/375
4 705/14
2 186/61
2 235/380
2 235/385
2 235/449
2 355/40
2 379/115.01
2 705/21
2 705/44
2 705/71
2 709/224
2 709/237

Cross-Reference Classifications

9 235/383
8 235/375
8 235/380
6 235/487
5 235/432
5 379/267
4 235/379
4 235/382
4 235/385
4 235/492
4 379/114.15
4 379/114.17
4 379/114.19
4 379/91.01
3 235/376
3 235/475
3 705/14
3 705/53
2 186/61
2 235/377
2 235/381
2 235/382.5
2 235/439
2 235/462.45
2 235/486
2 235/493

09483386_CLS

2 271/902
2 341/23
2 379/114.01
2 379/114.14
2 379/260
2 379/88.24
2 379/93.14
2 400/73
2 705/16
2 705/5
2 705/73
2 705/8
2 902/22
2 902/26
2 902/40
2 902/5

Combined Classifications

15 235/383
12 235/375
10 235/380
7 235/487
7 379/114.14
7 705/14
6 235/385
5 235/379
5 235/432
5 379/267
4 186/61
4 235/382
4 235/492
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3 235/376
3 235/475
3 705/16
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3 705/73
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2 177/25.15
2 235/377
2 235/381
2 235/382.5
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09483386_CLS

2 235/449
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2 235/493
2 271/902
2 341/23
2 355/40
2 379/114.01
2 379/115.01
2 379/157
2 379/201.02
2 379/242
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2 379/88.24
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2 379/93.14
2 400/73
2 705/21
2 705/23
2 705/41
2 705/410
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2 705/80
2 707/104.1
2 709/224
2 709/237
2 714/7
2 902/22
2 902/26
2 902/40
2 902/5

09483386_CLSTITLES

Titles of Most Frequently Occurring Classifications of Patents Returned

From A Search of 09483386 on December 18, 2002

15	235/383	(6 OR, 9 XR)
	Class 235 :	REGISTERS
	235/375	SYSTEMS CONTROLLED BY DATA BEARING RECORDS
	235/383	.Mechanized store
12	235/375	(4 OR, 8 XR)
	Class 235 :	REGISTERS
	235/375	SYSTEMS CONTROLLED BY DATA BEARING RECORDS
10	235/380	(2 OR, 8 XR)
	Class 235 :	REGISTERS
	235/375	SYSTEMS CONTROLLED BY DATA BEARING RECORDS
	235/380	.Credit or identification card systems
7	235/487	(1 OR, 6 XR)
	Class 235 :	REGISTERS
	235/487	RECORDS
7	379/114.14	(5 OR, 2 XR)
	Class 379 :	TELEPHONIC COMMUNICATIONS
	379/111	WITH USAGE MEASUREMENT (E.G., CALL OR TRAFFIC REGISTER)
	379/114.01	.Call charge metering or monitoring
	379/114.14	..Fraud detection or control
7	705/14	(4 OR, 3 XR)
	Class 705 :	DATA PROCESSING: FINANCIAL, BUSINESS PRACTICE, MANAGEMENT, OR COST/PRICE DETERMINATION
	705/1	AUTOMATED ELECTRICAL FINANCIAL OR BUSINESS PRACTICE OR MANAGEMENT ARRANGEMENT
	705/14	.Distribution or redemption of coupon, or incentive or promotion program
6	235/385	(2 OR, 4 XR)
	Class 235 :	REGISTERS
	235/375	SYSTEMS CONTROLLED BY DATA BEARING RECORDS
	235/385	.Inventory
5	235/379	(1 OR, 4 XR)
	Class 235 :	REGISTERS
	235/375	SYSTEMS CONTROLLED BY DATA BEARING RECORDS
	235/379	.Banking systems

09483386_CLSTITLES

- 5 235/432 (0 OR, 5 XR)
 - Class 235 : REGISTERS
 - 235/419 RECORD CONTROLLED CALCULATORS
 - 235/432 .With printing

- 5 379/267 (0 OR, 5 XR)
 - Class 379 : TELEPHONIC COMMUNICATIONS
 - 379/242 CENTRALIZED SWITCHING SYSTEM
 - 379/258 .Switching controlled in response to called station addressing signal
 - 379/260 ..With operator position or completion of call (e.g., dial "O", semiautomatic)
 - 379/267 ...Operator's console

- 4 186/61 (2 OR, 2 XR)
 - Class 186 : MERCHANDISING
 - 186/35 CUSTOMER SERVICE
 - 186/52 .Store service
 - 186/59 ..Checkout counter
 - 186/61 ...With means enabling price reading

- 4 235/382 (0 OR, 4 XR)
 - Class 235 : REGISTERS
 - 235/375 SYSTEMS CONTROLLED BY DATA BEARING RECORDS
 - 235/380 .Credit or identification card systems
 - 235/382 ..Permitting access

- 4 235/492 (0 OR, 4 XR)
 - Class 235 : REGISTERS
 - 235/487 RECORDS
 - 235/492 .Conductive

- 4 379/114.15 (0 OR, 4 XR)
 - Class 379 : TELEPHONIC COMMUNICATIONS
 - 379/111 WITH USAGE MEASUREMENT (E.G., CALL OR TRAFFIC REGISTER)
 - 379/114.01 .Call charge metering or monitoring
 - 379/114.15 ..Calling card

- 4 379/114.17 (0 OR, 4 XR)
 - Class 379 : TELEPHONIC COMMUNICATIONS
 - 379/111 WITH USAGE MEASUREMENT (E.G., CALL OR TRAFFIC REGISTER)
 - 379/114.01 .Call charge metering or monitoring
 - 379/114.15 ..Calling card
 - 379/114.17 ...Monitoring account or card usage balance

09483386_CLSTITLES

4 379/114.19 (0 OR, 4 XR)
 Class 379 : TELEPHONIC COMMUNICATIONS
 379/111 WITH USAGE MEASUREMENT (E.G., CALL OR TRAFFIC
 REGISTER)
 379/114.01 .Call charge metering or monitoring
 379/114.15 ..Calling card
 379/114.19 ...Credit card

4 379/91.01 (0 OR, 4 XR)
 Class 379 : TELEPHONIC COMMUNICATIONS
 379/90.01 TELEPHONE LINE OR SYSTEM COMBINED WITH DIVERSE
 ELECTRICAL SYSTEM OR SIGNALLING (E.G., COM
 POSITE)
 379/91.01 .Credit authorization

3 235/376 (0 OR, 3 XR)
 Class 235 : REGISTERS
 235/375 SYSTEMS CONTROLLED BY DATA BEARING RECORDS
 235/376 .Operations analysis

3 235/475 (0 OR, 3 XR)
 Class 235 : REGISTERS
 235/435 CODED RECORD SENSORS
 235/475 .Feed mechanisms

3 705/16 (1 OR, 2 XR)
 Class 705 : DATA PROCESSING: FINANCIAL, BUSINESS
 PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN
 ATION
 705/1 AUTOMATED ELECTRICAL FINANCIAL OR BUSINESS
 PRACTICE OR MANAGEMENT ARRANGEMENT
 705/16 .Including point of sale terminal or electroni
 c
 cash register

3 705/44 (2 OR, 1 XR)
 Class 705 : DATA PROCESSING: FINANCIAL, BUSINESS
 PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN
 ATION
 705/1 AUTOMATED ELECTRICAL FINANCIAL OR BUSINESS
 PRACTICE OR MANAGEMENT ARRANGEMENT
 705/35 .Finance (e.g., banking, investment or credit)
 705/39 ..Including funds transfer or credit
 transaction
 705/44 ...Requiring authorization or authentication

3 705/5 (1 OR, 2 XR)

09483386 CLSTITLES

Class 705 : DATA PROCESSING: FINANCIAL, BUSINESS
PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN

ATION

705/1 AUTOMATED ELECTRICAL FINANCIAL OR BUSINESS
PRACTICE OR MANAGEMENT ARRANGEMENT

705/5 .Reservation, check-in, or booking display for
reserved space

3 705/53 (0 OR, 3 XR)

Class 705 : DATA PROCESSING: FINANCIAL, BUSINESS
PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN

ATION

705/50 BUSINESS PROCESSING USING CRYPTOGRAPHY

705/51 .Usage protection of distributed data files

705/52 ..Usage or charge determination

705/53 ...Including third party for collecting or
distributing payment (e.g., clearinghouse)

3 705/73 (1 OR, 2 XR)

Class 705 : DATA PROCESSING: FINANCIAL, BUSINESS
PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN

ATION

705/50 BUSINESS PROCESSING USING CRYPTOGRAPHY

705/64 .Secure transaction (e.g., EFT/POS)

705/73 ..Terminal detail (e.g., initializing)

2 141/94 (1 OR, 1 XR)

Class 141 : FLUENT MATERIAL HANDLING, WITH RECEIVER OR
RECEIVER COACTING MEANS

141/94 WITH SIGNAL, INDICATOR, RECORDER, INSPECTION
MEANS OR EXHIBITOR

2 177/25.15 (1 OR, 1 XR)

Class 177 : WEIGHING SCALES

177/25.11 COMPUTER

177/25.12 .Electrical

177/25.13 ..Digital

177/25.14 ...Multiplying or dividing scales

177/25.15Price

2 235/377 (0 OR, 2 XR)

Class 235 : REGISTERS

235/375 SYSTEMS CONTROLLED BY DATA BEARING RECORDS

235/377 .Time analysis

2 235/381 (0 OR, 2 XR)

Class 235 : REGISTERS

235/375 SYSTEMS CONTROLLED BY DATA BEARING RECORDS

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235/380	.Credit or identification card systems
235/381	..With vending
2 235/382.5	(0 OR, 2 XR)
Class 235 :	REGISTERS
235/375	SYSTEMS CONTROLLED BY DATA BEARING RECORDS
235/380	.Credit or identification card systems
235/382	..Permitting access
235/382.5	...Changeable authorization
2 235/439	(0 OR, 2 XR)
Class 235 :	REGISTERS
235/435	CODED RECORD SENSORS
235/439	.Particular sensor structure
2 235/449	(2 OR, 0 XR)
Class 235 :	REGISTERS
235/435	CODED RECORD SENSORS
235/439	.Particular sensor structure
235/449	..Magnetic
2 235/462.45	(0 OR, 2 XR)
Class 235 :	REGISTERS
235/435	CODED RECORD SENSORS
235/439	.Particular sensor structure
235/454	..Optical
235/462.01	...Bar code
235/462.43Specified housing or mounting detail
235/462.45Hand-held (e.g., portable)
2 235/486	(0 OR, 2 XR)
Class 235 :	REGISTERS
235/435	CODED RECORD SENSORS
235/486	.Holding devices
2 235/493	(0 OR, 2 XR)
Class 235 :	REGISTERS
235/487	RECORDS
235/493	.Magnetic
2 271/902	(0 OR, 2 XR)
Class 271 :	SHEET FEEDING OR DELIVERING
271/902	REVERSE DIRECTION OF SHEET MOVEMENT
2 341/23	(0 OR, 2 XR)
Class 341 :	CODED DATA GENERATION OR CONVERSION
341/20	BODILY ACTUATED CODE GENERATOR
341/22	.Including keyboard or keypad

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341/23 ..Variable key legends

2 355/40 (2 OR, 0 XR)
Class 355 : PHOTOCOPYING
355/18 PROJECTION PRINTING AND COPYING CAMERAS
355/40 .Identifying, composing, or selecting

2 379/114.01 (0 OR, 2 XR)
Class 379 : TELEPHONIC COMMUNICATIONS
379/111 WITH USAGE MEASUREMENT (E.G., CALL OR TRAFFIC
REGISTER)
379/114.01 .Call charge metering or monitoring

2 379/115.01 (2 OR, 0 XR)
Class 379 : TELEPHONIC COMMUNICATIONS
379/111 WITH USAGE MEASUREMENT (E.G., CALL OR TRAFFIC
REGISTER)
379/114.01 .Call charge metering or monitoring
379/115.01 ..Interexchange billing operation

2 379/157 (1 OR, 1 XR)
Class 379 : TELEPHONIC COMMUNICATIONS
379/156 MULTI-LINE OR KEY SUBSTATION SYSTEM WITH
SELECTIVE SWITCHING AND CENTRAL SWITCHING

OFFICE CONNECTION

379/157 .With special service

2 379/201.02 (1 OR, 1 XR)
Class 379 : TELEPHONIC COMMUNICATIONS
379/201.01 SPECIAL SERVICES
379/201.02 .Service profile (e.g., calling service)

2 379/242 (1 OR, 1 XR)
Class 379 : TELEPHONIC COMMUNICATIONS
379/242 CENTRALIZED SWITCHING SYSTEM

2 379/260 (0 OR, 2 XR)
Class 379 : TELEPHONIC COMMUNICATIONS
379/242 CENTRALIZED SWITCHING SYSTEM
379/258 .Switching controlled in response to called
station addressing signal
379/260 ..With operator position or completion of call
(e.g., dial "O", semiautomatic)

2 379/88.24 (0 OR, 2 XR)
Class 379 : TELEPHONIC COMMUNICATIONS
379/67.1 AUDIO MESSAGE STORAGE, RETRIEVAL, OR SYNTHESIS

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379/88.22 .Message management
 379/88.23 ..Controlled by subscriber or caller
 379/88.24 ...By generated tone

2 379/91.02 (1 OR, 1 XR)

Class 379 : TELEPHONIC COMMUNICATIONS

379/90.01 TELEPHONE LINE OR SYSTEM COMBINED WITH DIVERSE
 ELECTRICAL SYSTEM OR SIGNALLING (E.G., CO

MPOSITE)

379/91.01 .Credit authorization
 379/91.02 ..At switching station

2 379/93.14 (0 OR, 2 XR)

Class 379 : TELEPHONIC COMMUNICATIONS

379/90.01 TELEPHONE LINE OR SYSTEM COMBINED WITH DIVERSE
 ELECTRICAL SYSTEM OR SIGNALLING (E.G., CO

MPOSITE)

379/93.01 .Having transmission of a digital message
 signal over a telephone line
 379/93.14 ..Having switching station

2 400/73 (0 OR, 2 XR)

Class 400 : TYPEWRITING MACHINES

400/70 INCLUDING SELECTION OF TYPE-FACE BY
 PROGRAMMED-CONTROL-SYSTEM OR BY REMOTE CON

TROL

400/73 .Including particular reader structure and
 operation

2 705/21 (2 OR, 0 XR)

Class 705 : DATA PROCESSING: FINANCIAL, BUSINESS
 PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN

ATION

705/1 AUTOMATED ELECTRICAL FINANCIAL OR BUSINESS
 PRACTICE OR MANAGEMENT ARRANGEMENT

705/16 .Including point of sale terminal or electroni

c

705/21 cash register
 ..Interconnection or interaction of plural

computer (e.g.,

m host to ECR or

network detail, transfer of information fro
 from ECR to ECR, etc.)

2 705/23 (1 OR, 1 XR)

Class 705 : DATA PROCESSING: FINANCIAL, BUSINESS

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PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN

ATION

705/1 AUTOMATED ELECTRICAL FINANCIAL OR BUSINESS
PRACTICE OR MANAGEMENT ARRANGEMENT

705/16 .Including point of sale terminal or electroni
c
cash register

705/23 ..Input by product or record sensing (weighing
,
scanner processing)

2 705/41

(1 OR, 1 XR)

Class

705 : DATA PROCESSING: FINANCIAL, BUSINESS
PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN

ATION

705/1 AUTOMATED ELECTRICAL FINANCIAL OR BUSINESS
PRACTICE OR MANAGEMENT ARRANGEMENT

705/35 .Finance (e.g., banking, investment or credit)

705/39 ..Including funds transfer or credit
transaction

705/41 ...Having programming of a portable memory
device (e.g., IC card, "electronic purse")

2 705/410

(1 OR, 1 XR)

Class

705 : DATA PROCESSING: FINANCIAL, BUSINESS
PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN

ATION

705/400 FOR COST/PRICE

705/401 .Postage meter system

705/410 ..Specialized function performed

2 705/57

(1 OR, 1 XR)

Class

705 : DATA PROCESSING: FINANCIAL, BUSINESS
PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN

ATION

705/50 BUSINESS PROCESSING USING CRYPTOGRAPHY

705/51 .Usage protection of distributed data files

705/57 ..Copy protection or prevention

2 705/71

(2 OR, 0 XR)

Class

705 : DATA PROCESSING: FINANCIAL, BUSINESS
PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN

ATION

705/50 BUSINESS PROCESSING USING CRYPTOGRAPHY

705/64 .Secure transaction (e.g., EFT/POS)

705/71 ..Including key management

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2 705/8 (0 OR, 2 XR)
 Class 705 : DATA PROCESSING: FINANCIAL, BUSINESS
 PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN
 ATION
 705/1 AUTOMATED ELECTRICAL FINANCIAL OR BUSINESS
 PRACTICE OR MANAGEMENT ARRANGEMENT
 705/7 .Operations research
 705/8 ..Allocating resources or scheduling for an
 administrative function

2 705/80 (1 OR, 1 XR)
 Class 705 : DATA PROCESSING: FINANCIAL, BUSINESS
 PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN
 ATION
 705/80 ELECTRONIC NEGOTIATION

2 707/104.1 (1 OR, 1 XR)
 Class 707 : DATA PROCESSING: DATABASE AND FILE
 MANAGEMENT, DATA STRUCTURES, OR DOCUMENT P
 ROCESSING
 707/100 DATABASE SCHEMA OR DATA STRUCTURE
 707/104.1 .Application of database or data structure
 (e.g., distributed, multimedia, image)

2 709/224 (2 OR, 0 XR)
 Class 709 : ELECTRICAL COMPUTERS AND DIGITAL PROCESSING
 SYSTEMS: MULTIPLE COMPUTER OR PROCESS COO
 RDINATING
 709/200 MULTICOMPUTER DATA TRANSFERRING
 709/223 .Computer network managing
 709/224 ..Computer network monitoring

2 709/237 (2 OR, 0 XR)
 Class 709 : ELECTRICAL COMPUTERS AND DIGITAL PROCESSING
 SYSTEMS: MULTIPLE COMPUTER OR PROCESS COO
 RDINATING
 709/200 MULTICOMPUTER DATA TRANSFERRING
 709/230 .Computer-to-computer protocol implementing
 709/237 ..Computer-to-computer handshaking

2 714/7 (1 OR, 1 XR)
 Class 714 : ERROR DETECTION/CORRECTION AND FAULT
 DETECTION/RECOVERY
 714/100 DATA PROCESSING SYSTEM ERROR OR FAULT HANDLING
 714/1 .Reliability and availability
 714/2 ..Fault recovery
 714/3 ...By masking or reconfiguration

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714/5Of memory or peripheral subsystem
714/6Redundant stored data accessed (e.g., duplicated data, error correction coded data, or other parity-type data)
714/7Reconfiguration (e.g., adding a replacement storage component)

2	902/22	(0 OR, 2 XR)
	Class	902 : ELECTRONIC FUNDS TRANSFER
	902/22	TERMINAL* REGISTERS TRANSACTION* (E.G., POINT OF SALE TERMINAL*)

2	902/26	(0 OR, 2 XR)
	Class	902 : ELECTRONIC FUNDS TRANSFER
	902/25	SPECIFIC IDENTIFIER* (E.G., BANK CARD)
	902/26	.Including semiconductor chip (e.g., smart card)

2	902/40	(0 OR, 2 XR)
	Class	902 : ELECTRONIC FUNDS TRANSFER
	902/37	SYSTEM*
	902/40	.Transaction* processing

2	902/5	(0 OR, 2 XR)
	Class	902 : ELECTRONIC FUNDS TRANSFER
	902/1	WITH ELECTRONIC MEANS PROVIDING SECURITY
	902/4	.Means to read data stored on identifier*
	902/5	..And to verify identity of user*

09483386_LIST

PLUS Search Results for S/N 09483386, Searched December 18, 2002

4484269
4587411
4780599
5491471
5586175
5590181
5615251
5633919
5638430
5760877
5799156
5820793
5838251
5854833
5867566
5873099
6016343
4021619
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4287567
4373133
4408203
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4418411
4481587
4521677
4630201
4766293
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4821267
4836309
4840344
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4879649
4900909
4982346
5021640
5177345
5260552
5305375
5375226
5412191
5468942
5541858
5542081

09483386_LIST

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6363488
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4905274
5239165
6003031
4835711
5202825
5251179
5353218
5375680
5551021
5553127
5805831
5822735
5906228
5969633
5995944
6028856
6069944
6073252
6134304
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4362928
4403119
4417136
4419573
4433207
4475189

09483386_LIST

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4797913
4825045
4833308

09483386_QUAL

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5491471 99
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5799156 99
5820793 99
5838251 99
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5867566 99
5873099 99
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4021619 98
4259720 98
4287567 98
4373133 98
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4521677 98
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4821186 98
4821267 98
4836309 98
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4982346 98
5021640 98
5177345 98
5260552 98
5305375 98
5375226 98
5412191 98
5468942 98
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5557544 98
5794213 98

09483386_QUAL

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5965862 98
5991762 98
6047888 98
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6279038 98
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6363488 98
6389402 98
6427140 98
4905274 83
5239165 83
6003031 83
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5251179 82
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5375680 82
5551021 82
5553127 82
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6069944 82
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4417136 82
4419573 82
4433207 82
4475189 82
4488004 82
4509128 82

09483386_QUAL

4550246 82
4797913 82
4825045 82
4833308 82

ability 1
abstract 1
accordance 4
according 19
achieved 1
activity 4
advantages 2
affinity 2
aggregating 3
ago 1
all 4
also 9
amount 1
amr 1
an 11
analyses 3
analysis 12
analytical 2
analyzing 6
and 54
another 2
any 2
apparatus 2
appendices 1
application 8
applications 8
approaches 2
architecture 1
are 7
area 1
as 18
aspect 4
assimilated 1
at 10
attached 2
attorney 5
automation 1
average 1
background 1
based 7
bases 1
basis 1
be 16
behavior 2
being 2
bell 1
benefits 2
brackets 1

brief 1
briefcases 1
built 1
business 9
businesses 1
but 2
buy 1
by 5
can 29
centric 1
certain 1
chen 4
claims 1
classification 1
co 1
code 23
commonly 1
components 1
comprise 1
comprised 1
comprises 4
computer 18
computers 2
concurrently 1
conducting 1
configuration 2
conflicting 1
conjunction 2
contained 3
content 1
continues 1
continuing 1
conventional 1
could 1
cr 1
create 1
creating 15
cross 1
cumulative 1
curve 1
customer 27
customers 1
customize 1
customized 2
daily 1
data 82
database 14
databases 3

decision 5
definition 4
demographic 1
described 1
description 2
design 1
developers 1
development 1
differ 1
different 4
dimension 4
disadvantage 1
disclosure 2
display 3
displaying 1
displays 1
docket 5
documents 1
drawings 2
dynamic 3
dynamics 2
each 2
easily 1
elements 2
embodiment 11
embodiments 15
emphasize 1
enable 1
enables 1
enterprise 8
entirety 2
entitled 4
environment 8
especially 2
even 2
ever 1
every 1
example 1
examples 1
exemplary 2
exist 2
expandability 1
explosion 1
exponential 1
fact 5
few 2
field 1
fig 2

figs 5
filed 2
filtering 1
financial 1
first 11
fit 1
flowcharts 1
focus 1
following 2
for 69
foresee 1
formats 3
forms 2
forth 1
fractal 1
frequency 1
from 13
functioning 1
functions 1
further 6
gains 1
generally 1
generic 1
geographic 1
geometry 1
governments 1
graphically 3
greater 1
group 1
groups 2
have 3
having 2
help 1
hereby 1
herein 1
heretofore 1
hierarchy 2
histogram 1
homes 1
human 2
ia 1
identity 1
illustrate 5
illustrates 2
impact 1
implemented 1
implementing 1
importance 1

improved 1
in 47
include 5
included 1
includes 3
including 3
incorporated 2
increasing 1
indicating 1
individuals 1
information 15
inherent 1
input 4
integration 2
interoperable 1
into 1
invention 28
is 11
it 1
its 1
january 1
just 1
known 1
lb 1
least 10
li 4
life 1
like 5
limit 1
line 2
linear 1
list 1
lives 1
loci 2
lost 1
manage 1
managed 1
management 1
many 5
mapping 6
markedly 1
marts 3
may 2
measures 4
meta 4
method 2
migrate 1
migrating 1

migration 1
mining 1
mode 1
model 19
modeling 2
models 10
monetary 1
more 9
moving 1
must 2
nature 1
needed 1
needs 1
net 1
networks 1
neural 1
no 5
now 1
nr 1
number 4
numerous 1
of 50
offices 1
often 1
olap 6
on 6
one 21
operation 1
or 9
order 3
organization 2
organize 1
organized 2
other 4
others 1
our 5
ous 1
over 2
owned 1
pa 1
pareto 1
part 3
particular 8
patent 6
pending 1
perceived 1
percentile 1
performance 4

place 1
plurality 4
popular 2
portion 1
portions 1
present 23
presently 1
priority 1
problems 1
process 1
processing 4
product 3
profile 8
profiles 3
profiling 1
profitability 1
program 16
programs 1
proliferation 1
propensity 2
provide 9
provided 1
provides 10
providing 1
provisional 2
purposes 2
quantitative 1
quickly 1
range 1
ranking 1
rapid 1
rate 1
re 1
realized 1
receiving 5
recency 1
records 2
reference 3
references 1
regressions 1
related 1
relates 1
relationships 4
remaining 1
remains 1
report 6
reports 1
representations 2

representative 7
represents 1
require 1
requirements 1
resolve 1
results 2
retention 1
reusable 1
reverse 2
rules 1
said 1
same 1
satchels 1
schema 2
schools 1
scoring 1
second 8
segmentation 1
selectable 1
selection 3
sequence 1
serial 4
series 1
serve 1
server 3
simplified 1
solve 1
some 2
sorted 1
sources 9
specific 1
specifically 1
specification 2
star 2
static 1
statistical 1
steps 1
stored 2
structure 1
such 13
suitable 1
summarized 1
summary 1
support 5
system 11
systems 7
table 9
tables 1

technique 2
techniques 13
technology 3
terminate 1
than 1
that 4
the 121
their 2
them 1
these 3
they 1
third 1
this 5
though 1
throughout 1
time 2
to 52
tools 4
traditional 2
transferring 1
translation 2
trees 1
turned 2
typically 3
understanding 1
upon 3
us 2
usability 1
use 2
used 4
useful 2
user 2
users 1
using 2
usually 3
value 2
variety 4
vi 1
viewing 1
visual 2
visualization 4
visualizing 11
warehouse 4
warehouses 3
warehousing 10
way 1
wen 4
what 1

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which 2
while 1
with 11
years 1
yet 2